Gadsden Valuations

Technical Summary

Meridian v6.15 • November 2026

1. Model Overview

Gadsden Meridian is an automated valuation model (AVM) producing point estimates of residential property market value for properties in England and Wales.

For each property, the model produces:

- A point estimate of market value (£) with prediction interval
- A per-property FSD mapped to the Fitch A–D classification bands and the EAA 0–7 scale (or a no-value response)
- Comparable transaction evidence supporting the estimate
- A downloadable PDF report with full audit trail

2. Intended Use Cases

- Valuation cascade integration — first node in an AVM → desktop → physical inspection workflow
- Portfolio revaluation for Basel 3.1 compliance (expected January 2027)
- Remortgage AVM-assisted valuations where physical inspection is not proportionate
- Independent cross-check against physical valuations or competing AVM outputs
- Desktop review support for valuers conducting restricted-service assessments
- Market monitoring for the 10% revaluation threshold

3. Coverage

England and Wales. Four standard residential property types: detached, semi-detached, terraced, and flats/maisonettes.

Exclusions: Scotland, Northern Ireland, commercial property, new-build prior to first sale, non-standard constructions.

4. Methodology

Gradient-boosted decision tree ensemble. Training target: HM Land Registry sale prices. Features draw on the EPC register and official open datasets covering schools, crime, flood risk, transport and demographics.

5. Validation Approach

All accuracy metrics use strict walk-forward testing: the model is trained on transactions up to a cutoff date and tested exclusively on future transactions it has never seen. The current test set comprises 147,239 transactions (Q2-2026).

6. Benchmark Methodology

All accuracy metrics are measured against **Land Registry completion prices** — the actual amount paid in arm's-length transactions. This is a materially harder test than benchmarking against surveyor opinion.

The industry leader, Hometrack, reports ~80% PE10 benchmarked against surveyor valuations. Published PE10 figures from providers using the surveyor benchmark are not directly comparable with ours.

7. Accuracy Metrics

Metric	Value	Description
MdAPE	**8.1%**	Median Absolute Percentage Error
PE5	**33.5%**	Within ±5% of sale price

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Metric	Value	Description
PE10	**58.8%**	Within ±10% of sale price
PE15	**74.9%**	Within ±15% of sale price
PE20	**84.5%**	Within ±20% of sale price
Bias	**0.59%**	Systematic over/undervaluation
FSD	**30.3%**	Forecast Standard Deviation
Transactions	147,239	Q2-2026 Land Registry completions

8. By Property Type

Type	n	MdAPE	PE10	PE15	PE20	Bias
Flat	23,878	9.9%	50.4%	66.5%	77.0%	+4.2%
Terraced	47,455	8.6%	55.9%	71.5%	81.2%	+1.7%
Semi-Detached	44,377	8.0%	59.0%	74.9%	84.2%	+1.3%
Detached	31,529	7.9%	59.8%	75.9%	85.2%	+1.4%

9. By Price Band

Band	n	MdAPE	PE10	PE15	PE20	Bias
<£150k	22,813	14.2%	37.9%	52.0%	62.7%	+18.5%
£150-300k	59,923	8.1%	58.8%	75.0%	84.6%	+0.6%
£300-500k	42,371	7.1%	64.5%	80.1%	88.6%	-1.8%
£500k-1M	19,717	8.2%	58.2%	75.4%	85.7%	-3.9%
£1M+	2,415	12.5%	40.7%	57.9%	71.4%	-7.7%

10. Confidence Model

Each valuation receives a per-property Forecast Standard Deviation (FSD) from a granular lookup (confidence decile × property type × price band), mapped to the Fitch RMBS classification bands.

Band	FSD Range
Band A	FSD ≤ 0.05
Band B	≤ 0.10
Band C	≤ 0.20
Band D	> 0.20

Properties with insufficient data are returned as a no-value response rather than valued with false confidence. An EAA 0–7 confidence level, derived from the same FSD, is included on every response.

11. Known Limitations

The model values properties based on recorded data. It cannot account for:

- **Internal condition** — renovation status, kitchen/bathroom quality, structural issues
- **Bespoke improvements** — extensions or conversions not yet reflected in EPC or planning data
- **Legal encumbrances** — restrictive covenants, rights of way, leasehold complications
- **Micro-location** — specific view, aspect, noise, or neighbourhood factors
- **Market lag** — Land Registry data lags completion by 2–4 months

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12. Data Sources

Source	Update Frequency
HM Land Registry Price Paid	Monthly
EPC Register	Monthly
ONS Census 2021	Decennial
ONS House Price Index	Monthly
GIAS School Register	Daily
Ofsted Inspection Ratings	Rolling
Environment Agency Flood Zones	Annual

The model rests on UK public-sector open data — HM Land Registry Price Paid (the training target), the Energy Performance Certificate register, and official open datasets covering schools, crime, flood risk, transport and demographics.

13. How Our Documentation Serves Lender Obligations

Standard	What We Supply
PRA SS1/23	Published methodology, accuracy monitoring, confidence indicators, per-valuation audit trail
Basel 3.1	Portfolio revaluation capability, 10% threshold monitoring, batch and API delivery
IVS 105	Model characteristics documentation, validation methodology, limitation acknowledgement
EAA ESSVM 3rd Edition	Methodology disclosure, FSD with an EAA 0–7 confidence level on every API response, segmented accuracy
RICS Red Book (Jan 2025)	Consistent with PS 1.3, PS 1.6, and VPS 5 disclosure requirements

14. Further Information

Further technical detail is available on request.

Contact: sales@gadsdenvaluations.com

15. Data Sources & Attribution

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